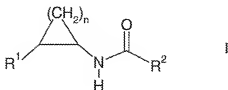


AMENDMENT TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently amended) A compound of the formula I,



wherein:

R¹ is aryl or heteroaryl, each of which is optionally substituted one or more times by C₁-C₆-alkyl, halogen, CF₃, C₁-C₆-alkoxy, C₁-C₆-alkylmercapto, -CN, COOR¹⁰, CONR¹¹R¹², NR¹³R¹⁴, S(O)ₘR¹⁵ or S(O)₂NR¹⁶R¹⁷;

R² is aryl or heteroaryl, oxazolyl, thiazolyl or pyrrolyl, each of which is optionally substituted one or more times by:

halogen, -CN, -NH₂, C₃-C₈-alkandyl, phenyl, heteroaryl, aryl-substituted C₁-C₄-alkyl, heteroaryl-substituted C₁-C₄-alkyl, -CF₃, -NO₂, -OH, phenoxy, benzyloxy, (C₁-C₁₀-alkyl)-COO-, -S(O)ₘR²⁰, -SH, phenylamino, benzylamino, (C₁-C₁₀-alkyl)-CONH-, (C₁-C₁₀-alkyl)-CO-N(C₁-C₄-alkyl)-, phenyl-CONH-, phenyl-CO-N(C₁-C₄-alkyl)-, heteroaryl-CONH-, heteroaryl-CO-N(C₁-C₄-alkyl)-, (C₁-C₁₀-alkyl)-CO-, phenyl-CO-, heteroaryl-CO-, CF₃-CO-, -OCH₂O-, -OCF₂O-, -OCH₂CH₂O-, -CH₂CH₂O-, -COOR²¹, -CONR²²R²³, -C(NH)-NH₂, -SO₂NR²⁴R²⁵, R²⁶SO₂NH-, R²⁷SO₂N(C₁-C₆-alkyl)-,

optionally substituted C₁-C₁₀-alkyl, optionally substituted C₂-C₁₀-alkenyl, optionally substituted C₂-

C₁₀-alkynyl, optionally substituted C₁-C₁₀-alkoxy, optionally substituted C₁-C₁₀-alkylamino, optionally substituted di(C₁-C₁₀-alkyl)amino, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of F, OH, C₁-C₈-alkoxy, aryloxy, C₁-C₈-alkylmercapto, NH₂, C₁-C₈-alkylamino and di(C₁-C₈-alkyl)amino, or a residue of a saturated or partially unsaturated aliphatic monocyclic 5- to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N, O and S, wherein the heterocycle is optionally substituted one or more times by halogen, C₁-C₃-alkyl, C₁-C₃-alkoxy, OH, oxo or CF₃, and wherein the heterocycle is optionally condensed to the aryl group or heteroaryl group representing R², and

wherein for each aryl or heteroaryl, oxazolyl, thiazolyl or pyrrolyl as R² bearing an aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing or phenyl-containing group as an optional substituent, that each aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-

containing group is optionally substituted one or more times by halogen, -CN, C₁-C₃-alkyl, OH, C₁-C₃-alkoxy or CF₃;

R¹⁰ is H, C₁-C₆-alkyl or benzyl, wherein the phenyl group of the benzyl is optionally substituted one or more times by halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R¹¹ is H, C₁-C₆-alkyl, which is optionally substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R¹² is H or C₁-C₆-alkyl;

R¹³ is H, C₁-C₆-alkyl, optionally substituted phenyl, optionally substituted benzyl, optionally substituted heteroaryl, optionally substituted phenyl-CO-, or optionally substituted heteroaryl-CO-, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R¹⁴ is H or C₁-C₆-alkyl;

R¹⁵ is C₁-C₆-alkyl, CF₃, optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R¹⁶ is H, C₁-C₆-alkyl, which is optionally substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl, and heteroaryl is optionally substituted one or more times by halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R¹⁷ is H or C₁-C₆-alkyl;

R²⁰ is C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, OH, C₁-C₃-alkoxy, aryloxy, C₁-C₈-alkylmercapto, C₁-C₈-alkylamino, or di(C₁-C₈-alkyl)amino, CF₃,

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R²¹ is H.

C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, C₁-C₈-alkoxy or di(C₁-C₈-alkyl)amino,

aryl-(C₁-C₄-alkyl)- or heteroaryl-(C₁-C₄-alkyl)-, wherein each of the aryl-(C₁-C₄-alkyl)- or heteroaryl-(C₁-C₄-alkyl)- is optionally substituted one or more times by halogen, C₁-C₄-alkyl, C₁-C₄-alkoxy or di(C₁-C₈-alkyl)amino;

R²² is H, C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, C₁-C₈-alkoxy, di(C₁-C₈-alkyl)amino or phenyl,

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R²³ is H or C₁-C₁₀-alkyl;

R²⁴ is H, C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, C₁-C₈-alkoxy, di(C₁-C₈-alkyl)amino or phenyl,

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R²⁵ is H or C₁-C₁₀-alkyl;

R²⁶ is C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, OH, C₁-C₈-alkoxy, aryloxy, C₁-C₈-alkylmercapto, C₁-C₈-alkylamino, or di(C₁-C₈-alkyl)amino, CF₃,

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R²⁷ is C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, OH, C₁-C₈-alkoxy, aryloxy, C₁-C₈-alkylmercapto, C₁-C₈-alkylamino, or di(C₁-C₈-alkyl)amino, CF₃,

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, -CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

wherein heteroaryl is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

wherein aryl is phenyl, naphth-1-yl or naphth-2-yl;

m is 0, 1 or 2; and

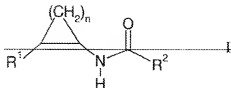
n is 1, 2, ~~or 3 or 4~~;

or a stereoisomer or a mixture of stereoisomers in any ratio of the compound, or a pharmaceutically acceptable salt of the compound, stereoisomer or mixture of stereoisomers of the compound;

provided that when R^1 is unsubstituted phenyl, then R^2 is other than unsubstituted phenyl, 4-bromophenyl, 3-methoxyphenyl, chlorosubstituted 4H-thieno[3,2-b]pyrrol-5-yl, unsubstituted thienyl, naphthyridinyl, unsubstituted pyridinyl, 3-hydroxy-4-methoxypyridin-2-yl, 2,6-dichloropyridin-4-yl or 3,4,5-trimethoxyphenyl.

2. (Original) The compound according to claim 1 wherein R^1 is optionally substituted phenyl.
3. (Cancelled)
4. (Original) The compound according to claim 1 wherein n is 1.
5. (Original) The compound according to claim 1 wherein n is 3.
6. (Currently amended) The compound according to claim 1 wherein R^2 is ~~phenyl or heteroaryl~~, oxazolyl, thiazolyl or pyrrolyl, each of which is optionally substituted one or more times by F, Cl, Br, C_1 - C_3 -alkyl, C_1 - C_3 -alkoxymethyl, 2-amino-3,3,3-trifluoropropyl-, CF_3 , C_3 - C_5 -alkandiy, phenyl, heteroaryl, benzyl, heteroaryl-methyl-, OH, C_1 - C_3 -alkoxy, phenoxy, trifluoromethoxy, 2,2,2-trifluoroethoxy, $(C_1$ - C_4 -alkyl)-COO, C_1 - C_3 -alkylmercapto, phenylmercapto, C_1 - C_3 -alkylsulfonyl, phenylsulfonyl, NH_2 , C_1 - C_4 -alkylamino, $di(C_1$ - C_4 -alkyl)amino, $(C_1$ - C_3 -alkyl)-CONH-, $(C_1$ - C_3 -alkyl)- SO_2 NH-, $(C_1$ - C_3 -alkyl)-CO-, phenyl-CO-, $-OCH_2O$ -, $-OCF_2O$ -, $-CH_2CH_2O$ -, $COO(C_1$ - C_4 -alkyl), $-CONH_2$, $-CONH(C_1$ - C_4 -alkyl), $-CON(di(C_1$ - C_4 -alkyl)), $-CN$ -, SO_2NH_2 -, $SO_2NH(C_1$ - C_4 -alkyl), $-SO_2N(di(C_1$ - C_4 -alkyl)), pyrrolidinyl, piperidinyl, morpholinyl or thiomorpholinyl, and
wherein for each ~~aryl or heteroaryl~~ oxazolyl, thiazolyl or pyrrolyl as R^2 bearing an heteroaryl, phenyl, heteroaryl-containing or phenyl-containing group as an optional substituent, that each heteroaryl, phenyl, heteroaryl-containing and phenyl-containing group is optionally substituted one or more times by halogen, $-CN$, C_1 - C_3 -alkyl, OH, C_1 - C_3 -alkoxy or CF_3 .

7. (Currently amended) A pharmaceutical ~~preparation~~ composition, comprising a pharmaceutically effective amount of ~~the compound according to claim 1 of formula 1~~.



wherein:

R^1 is aryl or heteroaryl, each of which is optionally substituted one or more times by C_2 - C_6 alkyl, halogen, CF_3 , C_1 - C_6 alkoxy, C_1 - C_6 alkylmercapto, CN , $COOR^{10}$, $CONR^{11}R^{12}$, $NR^{13}R^{14}$, $S(O)_nR^{15}$, or $S(O)_2NR^{16}R^{17}$;

R^2 is aryl or heteroaryl, each of which is optionally substituted one or more times by halogen, CN , NH_2 , C_2 - C_6 alkandyl, phenyl, heteroaryl, aryl-substituted C_1 - C_4 alkyl, heteroaryl-substituted C_2 - C_4 alkyl, CF_3 , NO_2 , OH , phenoxy, benzyloxy, $(C_1$ - C_{10} alkyl) COO , $S(O)_nR^{20}$, SH , phenylamino, benzylamino, $(C_1$ - C_{10} alkyl) $CONH$, $(C_1$ - C_{10} alkyl) CO $N(C_1$ - C_4 alkyl), phenyl $CONH$, phenyl CO $N(C_1$ - C_4 alkyl), heteroaryl $CONH$, heteroaryl CO $N(C_1$ - C_4 alkyl), $(C_1$ - C_{10} alkyl) CO , phenyl CO , heteroaryl CO , CF_3 , CO , OCH_3 , O , OCF_3 , O , OCH_2CH_2O , CH_2CH_2O , $COOR^{21}$, $CONR^{22}R^{23}$, $C(NH)NH_2$, $SO_2NR^{24}R^{25}$, $R^{26}SO_2NH$, $R^{27}SO_2N(C_1$ - C_6 alkyl),

optionally substituted C_1 - C_{10} alkyl, optionally substituted C_2 - C_{10} alkenyl, optionally substituted C_2 - C_{10} alkynyl, optionally substituted C_1 - C_{10} alkoxy, optionally substituted C_1 - C_{10} alkylamino, optionally substituted di(C_1 - C_{10} alkyl)amino, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of F , OH , C_1 - C_6 alkoxy, aryloxy, C_1 - C_6 alkylmercapto, NH_2 , C_1 - C_6 alkylamino and di(C_1 - C_6 alkyl)amino, or

a residue of a saturated or partially unsaturated aliphatic monocyclic 5- to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N , O and S , wherein the heterocycle is optionally substituted one or more times by halogen, C_1 - C_6 alkyl, C_1 - C_6 alkoxy, OH , oxo or CF_3 , and wherein the heterocycle is optionally condensed to the aryl group or heteroaryl group representing R^2 , and

wherein for each aryl or heteroaryl as R^2 bearing an aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing or phenyl-containing group as an optional substituent, that each aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-containing group is optionally substituted one or more times by halogen, CN , C_1 - C_6 alkyl, OH , C_1 - C_6 alkoxy or CF_3 ;

R^{10} is H , C_1 - C_6 alkyl or benzyl, wherein the phenyl group of the benzyl is optionally substituted one or more times by halogen, CN , C_1 - C_6 alkyl, C_1 - C_6 alkoxy or CF_3 ;

R^{11} is H , C_1 - C_6 alkyl, which is optionally substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, CN , C_1 - C_6 alkyl, C_1 - C_6 alkoxy or CF_3 ;

R^{12} is H or C_1-C_6 alkyl;

R^{13} is H, C_1-C_6 alkyl,

optionally-substituted phenyl, optionally-substituted benzyl, optionally-substituted heteroaryl, optionally-substituted phenyl-CO-, or optionally-substituted heteroaryl-CO-, wherein the optional substituents of the optionally-substituted substituents are selected from one or more of the group consisting of halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy and CF_3 ;

R^{14} is H or C_1-C_6 alkyl;

R^{15} is C_1-C_6 alkyl, CF_3 ,

optionally-substituted phenyl or optionally-substituted heteroaryl, wherein the optional substituents of the optionally-substituted substituents are selected from one or more of the group consisting of halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy and CF_3 ;

R^{16} is H, C_1-C_6 alkyl, which is optionally-substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl, and heteroaryl is optionally-substituted one or more times by halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy or CF_3 ;

R^{17} is H or C_1-C_6 alkyl;

R^{18} is C_1-C_6 alkyl, which is optionally-substituted one or more times by F, OH, C_1-C_3 alkoxy, aryloxy, C_1-C_3 alkylmercapto, C_1-C_3 alkylamino, or di(C_1-C_3 alkyl)amino;

CF_3 ,

optionally-substituted phenyl or optionally-substituted heteroaryl, wherein the optional substituents of the optionally-substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy and CF_3 ;

R^{19} is H;

C_1-C_{10} alkyl, which is optionally-substituted one or more times by F, C_1-C_3 alkoxy or di(C_1-C_3 alkyl)amino;

aryl (C_1-C_4 alkyl) or heteroaryl (C_1-C_4 alkyl), wherein each of the aryl (C_1-C_4 alkyl) or heteroaryl (C_1-C_4 alkyl) is optionally-substituted one or more times by halogen, C_1-C_3 alkyl, C_1-C_3 alkoxy or di(C_1-C_3 alkyl)amino;

R^{20} is H, C_1-C_{10} alkyl, which is optionally-substituted one or more times by F, C_1-C_3 alkoxy, di(C_1-C_3 alkyl)amino or phenyl,

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally-substituted one or more times by halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy or CF_3 ;

R^{23} is H or C_1-C_{10} -alkyl;

R^{24} is H , C_1-C_{10} -alkyl, which is optionally substituted one or more times by F , C_1-C_8 -alkoxy, $di(C_1-C_8$ -alkyl)amino or phenyl;

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, CN , C_1-C_3 -alkyl, C_1-C_2 -alkoxy or CF_3 ;

R^{25} is H or C_1-C_{10} -alkyl;

R^{26} is C_1-C_{10} -alkyl, which is optionally substituted one or more times by F , OH , C_1-C_8 -alkoxy, aryloxy, C_1-C_8 -alkylmercapto, C_1-C_8 -alkylamino, or $di(C_1-C_8$ -alkyl)amino, CF_{3x}

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN , C_1-C_3 -alkyl, C_1-C_2 -alkoxy and CF_3 ,

R^{27} is C_1-C_{10} -alkyl, which is optionally substituted one or more times by F , OH , C_1-C_8 -alkoxy, aryloxy, C_1-C_8 -alkylmercapto, C_1-C_8 -alkylamino, or $di(C_1-C_8$ -alkyl)amino, CF_{3y}

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN , C_1-C_3 -alkyl, C_1-C_2 -alkoxy and CF_3 ,

wherein heteroaryl is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

wherein a-aryl is phenyl, naphth-1-yl or naphth-2-yl;

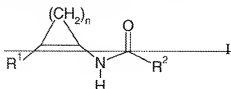
m is 0, 1 or 2; and

n is 1, 2, 3 or 4;

or a stereoisomer or a mixture of stereoisomers in any ratio of the compound, or a pharmaceutically acceptable salt of the compound, stereoisomer or mixture of stereoisomers of the compound,

and a pharmaceutically acceptable carrier.

8. (Withdrawn-currently amended) A method for the stimulation of the expression of endothelial NO synthase, in a patient in need thereof, comprising administering to such patient a pharmaceutically effective amount of the compound according to claim 1 of formula I,



wherein:

R^1 is aryl or heteroaryl, each of which is optionally substituted one or more times by C_1-C_6 alkyl, halogen, CF_3 , C_1-C_6 alkoxy, C_1-C_6 alkylmercapto, CN , $COOR^{10}$, $CONR^{11}R^{12}$, $NR^{13}R^{14}$, $S(O)_nR^{15}$ or $S(O)_2NR^{16}R^{17}$;

R^2 is aryl or heteroaryl, each of which is optionally substituted one or more times by halogen, CN , NH_2 , C_1-C_3 alkanediyl, phenyl, heteroaryl, aryl substituted C_1-C_4 alkyl, heteroaryl substituted C_1-C_4 alkyl, CF_3 , NO_2 , OH , phenoxy, benzyloxy, $(C_1-C_{10}$ alkyl) COO , $S(O)_nR^{20}$, SH , phenylamino, benzylamino, $(C_1-C_{10}$ alkyl) $CONH$, $(C_1-C_{10}$ alkyl) $CO N(C_1-C_4$ alkyl), phenyl $CONH$, phenyl $CO N(C_1-C_4$ alkyl), heteroaryl $CONH$, heteroaryl $CO N(C_1-C_4$ alkyl), $(C_1-C_{10}$ alkyl) CO , phenyl CO , heteroaryl CO , $CF_3 CO$, $OCH_3 O$, $OCF_3 O$, $OCH_2CH_3 O$, $CH_3CH_2 O$, $COOR^{21}$, $CONR^{22}R^{23}$, $C(NH)NH_2$, $SO_2NR^{24}R^{25}$, $R^{26}SO_2NH$, $R^{27}SO_2N(C_1-C_6$ alkyl), optionally substituted C_1-C_{10} alkyl, optionally substituted C_1-C_{10} alkenyl, optionally substituted C_1-C_{10} alkynyl, optionally substituted C_1-C_{10} alkoxy, optionally substituted C_1-C_{10} alkylamine, optionally substituted di(C_1-C_{10} alkyl)amino, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of F , OH , C_1-C_6 alkoxy, aryloxy, C_1-C_6 alkylmercapto, NH_2 , C_1-C_6 allylamino and di(C_1-C_6 allyl)amino, or

a residue of a saturated or partially unsaturated aliphatic monocyclic 5- to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N , O and S , wherein the heterocycle is optionally substituted one or more times by halogen, C_1-C_2 alkyl, C_1-C_3 alkoxy, OH , oxo or CF_3 , and wherein the heterocycle is optionally condensed to the aryl group or heteroaryl group representing R^2 , and

wherein for each aryl or heteroaryl as R^2 bearing an aryl, heteroaryl, phenyl, aryl containing, heteroaryl containing or phenyl containing group as an optional substituent, that each aryl, heteroaryl, phenyl, aryl containing, heteroaryl containing and phenyl containing group is optionally substituted one or more times by halogen, CN , C_1-C_2 alkyl, OH , C_1-C_3 alkoxy or CF_3 ;

R^{10} is H , C_1-C_6 alkyl or benzyl, wherein the phenyl group of the benzyl is optionally substituted one or more times by halogen, CN , C_1-C_2 alkyl, C_1-C_3 alkoxy or CF_3 ;

R^{11} is H , C_1-C_6 alkyl, which is optionally substituted by phenyl, phenyl, indenyl or

heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R⁴² is H or C₁-C₆-alkyl;

R⁴³ is H, C₁-C₆-alkyl;

optionally substituted phenyl, optionally substituted benzyl, optionally substituted heteroaryl, optionally substituted phenyl-CO-, or optionally substituted heteroaryl-CO-, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of halogen, CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R⁴⁴ is H or C₁-C₆-alkyl;

R⁴⁵ is C₁-C₆-alkyl, CF₃;

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of halogen, CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R⁴⁶ is H, C₁-C₆-alkyl, which is optionally substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl, and heteroaryl is optionally substituted one or more times by halogen, CN, C₁-C₃-alkyl, C₁-C₃-alkoxy or CF₃;

R⁴⁷ is H or C₁-C₆-alkyl;

R⁵⁰ is C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, OH, C₁-C₃-alkoxy, aryloxy, C₁-C₃-alkylmercapto, C₁-C₃-alkylamino, or di(C₁-C₃-alkyl)amino, CF₃;

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN, C₁-C₃-alkyl, C₁-C₃-alkoxy and CF₃;

R⁵¹ is H;

C₁-C₁₀-alkyl, which is optionally substituted one or more times by F, C₁-C₃-alkoxy or di(C₁-C₃-alkyl)amino;
aryl-(C₁-C₄-alkyl)- or heteroaryl-(C₁-C₄-alkyl)-, wherein each of the aryl-(C₁-C₄-alkyl)- or heteroaryl-(C₁-C₄-alkyl)- is optionally substituted one or more times by halogen, C₁-C₄-alkyl, C₁-C₄-alkoxy or di(C₁-C₃-alkyl)amino;

R^{20} is H, C_1-C_{10} -alkyl, which is optionally substituted one or more times by F, C_1-C_8 -alkoxy, di(C_1-C_8 -alkyl)amino or phenyl,

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, CN, C_1-C_3 -alkyl, C_1-C_3 -alkoxy or CF_3 ;

R^{23} is H or C_1-C_{10} -alkyl;

R^{24} is H, C_1-C_{10} -alkyl, which is optionally substituted one or more times by F, C_1-C_8 -alkoxy, di(C_1-C_8 -alkyl)amino or phenyl,

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, CN, C_1-C_3 -alkyl, C_1-C_3 -alkoxy or CF_3 ;

R^{25} is H or C_1-C_{10} -alkyl;

R^{26} is C_1-C_{10} -alkyl, which is optionally substituted one or more times by F, OH, C_1-C_8 -alkoxy, aryloxy, C_1-C_8 -alkylmercapto, C_1-C_8 -alkylamino, or di(C_1-C_8 -alkyl)amino, CF_3 ;

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN, C_1-C_3 -alkyl, C_1-C_3 -alkoxy and CF_3 ;

R^{27} is C_1-C_{10} -alkyl, which is optionally substituted one or more times by F, OH, C_1-C_8 -alkoxy, aryloxy, C_1-C_8 -alkylmercapto, C_1-C_8 -alkylamino, or di(C_1-C_8 -alkyl)amino, CF_3 ;

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN, C_1-C_3 -alkyl, C_1-C_3 -alkoxy and CF_3 ;

wherein heteroaryl is a residue of a 5-membered to 10-membered aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

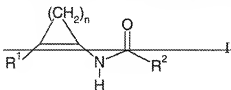
wherein aryl is phenyl, naphth-1-yl or naphth-2-yl;

m is 0, 1 or 2; and

n is 1, 2, 3 or 4;

or a stereoisomer or a mixture of stereoisomers in any ratio of the compound, or a pharmaceutically acceptable salt of the compound, stereoisomer or mixture of stereoisomers of the compound.

9. (Withdrawn-currently amended) A method for treatment of cardiovascular diseases, stable or unstable angina pectoris, coronary heart disease, Prinzmetal angina, acute coronary syndrome, heart failure, myocardial infarction, stroke, thrombosis, peripheral artery occlusive disease, endothelial dysfunction, atherosclerosis, restenosis, endothel damage after PTCA, hypertension, essential hypertension, pulmonary hypertension, secondary hypertension, renovascular hypertension, chronic glomerulonephritis, erectile dysfunction, ventricular arrhythmia, diabetes, diabetes complications, nephropathy, retinopathy, angiogenesis, asthma bronchiale, chronic renal failure, cirrhosis of the liver, osteoporosis, restricted memory performance or a restricted ability to learn, or for the lowering of cardiovascular risk of postmenopausal women or of women taking contraceptives, in a patient in need thereof, comprising administering to such patient a pharmaceutically effective amount of ~~the compound according to claim 1 of formula I;~~



wherein:

R¹ is aryl or heteroaryl, each of which is optionally substituted one or more times by C₁-C₆ alkyl, halogen, CF₃, C₁-C₆ alkoxy, C₁-C₆ alkylmercapto, CN, COOR¹⁰, CONR¹¹R¹², NR¹³R¹⁴, S(O)_mR¹⁵ or S(O)₂NR¹⁶R¹⁷;

R² is aryl or heteroaryl, each of which is optionally substituted one or more times by halogen, CN, NH₂, C₂-C₈ alkandyl, phenyl, heteroaryl, aryl substituted C₁-C₄ alkyl, heteroaryl substituted C₁-C₄ alkyl, CF₃, NO₂, OH, phenoxy, benzyloxy, (C₁-C₁₀ alkyl) COO, S(O)_mR²⁰, SH, phenylamino, benzylamino, (C₁-C₁₀ alkyl) CONH, (C₁-C₁₀ alkyl) CO N(C₁-C₄ alkyl), phenyl CONH, phenyl CO N(C₁-C₄ alkyl), heteroaryl CONH, heteroaryl CO N(C₁-C₄ alkyl), (C₁-C₁₀ alkyl) CO, phenyl CO, heteroaryl CO, CF₃ CO, OCH₃O, OCF₃O, OCH₂CH₂O, CH₂CH₂O, COOR²⁴, CONR²⁵R²⁶, C(NH)NH₂, SO₂NR²⁷R²⁸, R²⁹SO₂NH, R³⁰SO₂N(C₁-C₆ alkyl);

optionally substituted C₁-C₁₀ alkyl, optionally substituted C₃-C₁₀ alkenyl, optionally substituted C₃-C₁₀ alkynyl, optionally substituted C₃-C₁₀ alkoxy, optionally substituted C₁-C₁₀ alkylamino, optionally substituted di(C₁-C₁₀ alkyl)amino, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of F, OH, C₁-C₆ alkoxy, aryloxy, C₁-C₆ alkylmercapto, NH₂, C₁-C₆ alkylamino and di(C₁-C₆ alkyl)amino, or

a residue of a saturated or partially unsaturated aliphatic monocyclic 5- to 7-membered heterocycle containing 1, 2 or 3 heteroatoms selected from the group consisting of N, O and S, wherein the heterocycle is

optionally substituted one or more times by halogen, C_1-C_3 alkyl, C_1-C_3 alkoxy, OH, oxo or CF_3 ; and wherein the heterocycle is optionally condensed to the aryl group or heteroaryl group representing R^2 ; and

wherein for each aryl or heteroaryl as R^2 bearing an aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing or phenyl-containing group as an optional substituent, that each aryl, heteroaryl, phenyl, aryl-containing, heteroaryl-containing and phenyl-containing group is optionally substituted one or more times by halogen, CN, C_1-C_3 alkyl, OH, C_1-C_3 alkoxy or CF_3 ;

R^{10} is H, C_1-C_6 alkyl or benzyl, wherein the phenyl group of the benzyl is optionally substituted one or more times by halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy or CF_3 ;

R^{11} is H, C_1-C_6 alkyl, which is optionally substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally substituted one or more times by halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy or CF_3 ;

R^{12} is H or C_1-C_6 alkyl;

R^{13} is H, C_1-C_6 alkyl;

optionally substituted phenyl, optionally substituted benzyl, optionally substituted heteroaryl, optionally substituted phenyl-CO-, or optionally substituted heteroaryl-CO-, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy and CF_3 ;

R^{14} is H or C_1-C_6 alkyl;

R^{15} is C_1-C_6 alkyl, CF_3 ;

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted substituents are selected from one or more of the group consisting of halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy and CF_3 ;

R^{16} is H, C_1-C_6 alkyl, which is optionally substituted by phenyl, phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl, and heteroaryl is optionally substituted one or more times by halogen, CN, C_1-C_3 alkyl, C_1-C_3 alkoxy or CF_3 ;

R^{17} is H or C_1-C_6 alkyl;

R^{20} is C_1-C_{10} alkyl, which is optionally substituted one or more times by F, OH, C_1-C_3 alkoxy, aryloxy, C_1-C_8 alkylmercapto, C_1-C_8 alkylamino, or di(C_1-C_8 alkyl)amino;

CF₃;

optionally-substituted phenyl or optionally-substituted heteroaryl, wherein the optional substituents of the optionally-substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN, C₁-C₆-alkyl, C₁-C₃-alkoxy and CF₃,

R³³ is H;

C₄-C₁₀-alkyl, which is optionally-substituted one or more times by F, C₁-C₃-alkoxy or di(C₁-C₃-alkyl)amino;

aryl (C₂-C₄-alkyl) or heteroaryl (C₁-C₄-alkyl), wherein each of the aryl (C₂-C₄-alkyl) or heteroaryl (C₁-C₄-alkyl) is optionally-substituted one or more times by halogen, C₁-C₄-alkyl, C₁-C₃-alkoxy or di(C₁-C₃-alkyl)amino;

R²² is H, C₁-C₁₀-alkyl, which is optionally-substituted one or more times by F, C₁-C₃-alkoxy, di(C₁-C₃-alkyl)amino or phenyl;

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally-substituted one or more times by halogen, CN, C₁-C₆-alkyl, C₁-C₃-alkoxy or CF₃;

R²³ is H or C₁-C₁₀-alkyl;

R²⁴ is H, C₁-C₁₀-alkyl, which is optionally-substituted one or more times by F, C₁-C₃-alkoxy, di(C₁-C₃-alkyl)amino or phenyl;

phenyl, indanyl or heteroaryl, wherein each phenyl, indanyl and heteroaryl is optionally-substituted one or more times by halogen, CN, C₁-C₆-alkyl, C₁-C₃-alkoxy or CF₃;

R²⁵ is H or C₁-C₁₀-alkyl;

R²⁶ is C₁-C₁₀-alkyl, which is optionally-substituted one or more times by F, OH, C₁-C₃-alkoxy, aryloxy, C₁-C₃-alkylmercapto, C₁-C₃-alkylamino, or di(C₁-C₃-alkyl)amino; CF₃;

optionally-substituted phenyl or optionally-substituted heteroaryl, wherein the optional substituents of the optionally-substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, CN, C₁-C₆-alkyl, C₁-C₃-alkoxy and CF₃,

R²⁷ is C₁-C₁₀-alkyl, which is optionally-substituted one or more times by F, OH, C₁-C₃-alkoxy, aryloxy, C₁-C₃-alkylmercapto, C₁-C₃-alkylamino, or di(C₁-C₃-alkyl)amino; CF₃;

optionally substituted phenyl or optionally substituted heteroaryl, wherein the optional substituents of the optionally substituted phenyl and heteroaryl are selected from one or more of the group consisting of halogen, -CN, C₁-C₃ alkyl, C₁-C₃ alkoxy and CF₃,

wherein heteroaryl is a residue of a 5-membered to 10-membered, aromatic, monocyclic or bicyclic heterocycle containing one or more heteroatoms selected from the group consisting of N, O and S;

wherein aryl is phenyl, naphth-1-yl or naphth-2-yl;

m is 0, 1 or 2; and

n is 1, 2, 3 or 4;

or a stereoisomer or a mixture of stereoisomers in any ratio of the compound, or a pharmaceutically acceptable salt of the compound, stereoisomer or mixture of stereoisomers of the compound.